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INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

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temation	nal application No. 03/02952	International filing date (day/month/year) 24.07.2003	Priority date (day/month/year) 24.07.2002		
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International application No.

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1. With regard to the elements of the international application (Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17)): **Description, Pages** as originally filed 1-12 Claims, Numbers, and the manager of the contract of the contra as originally filed 1-18 **Drawings, Sheets** as originally filed 1/2-2/2 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item. These elements were available or furnished to this Authority in the following language: ☐ the language of a translation furnished for the purposes of the international search (under Rule 23.1(b)). the language of publication of the international application (under Rule 48.3(b)). the language of a translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3). 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing: contained in the international application in written form. filed together with the international application in computer readable form. furnished subsequently to this Authority in written form. furnished subsequently to this Authority in computer readable form. The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished. The statement that the information recorded in computer readable form is identical to the written sequence of the listing has been furnished. 4. The amendments have resulted in the cancellation of: the description, pages:

the claims,

the drawings,

Nos.:

sheets:



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5. 🗆	This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)).
	(Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.)

- 6. Additional observations, if necessary:
- V. Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- Novelty (N)

 Yes: Claims

 Inventive step (IS)

 Yes: Claims

 1-18

No: Claims

Industrial applicability (IA) Yes: Claims 1-18

No: Claims

2. Citations and explanations

see separate sheet

INTERNATIONAL PRELIMINARY **EXAMINATION REPORT - SEPARATE SHEET**

Item V:

- D1: WO 96 37112 A (CARTIGLIANO OFF SPA ;POLATO ANTONIO (IT)) 28 November 1996 (1996-11-28) cited in the application & EP 0 828 430 B 8 March 2000 (2000-03-08)
 - D2: DATABASE WPI Section Ch, Week 199415 Derwent Publications Ltd., London, GB; Class D13, AN 1994-125033 XP002258695 & SU 462 369 A (AGRIC ELECTRIF RES INST), 15 December 1993 (1993-12-15)
 - D3: DE 830 151 C (SIEMENS SCHUCKERTWERKE A G) 31 January 1952 46.4 (4952-01-31) A 1888 WAS A CAST OF THE OF THE PARTY OF THE CONTROL OF THE PARTY OF THE PARTY
 - D4: US-A-4 534 282 (MARINOZA RENE A) 13 August 1985 (1985-08-13)
 - D5: GB-A-2 193 624 (APV INT LTD) 17 February 1988 (1988-02-17)
 - D6: US-A-5 935 632 (LARSEN PETER H) 10 August 1999 (1999-08-10)
 - D7: EP-A-0 497 099 (CARTIGLIANO OFF SPA) 5 August 1992 (1992-08-05)
 - D8: GB 619 495 A (RCA CORP) 10 March 1949 (1949-03-10)
- None of the documents cited above discloses a method of treating liquids or a 2. plant for the method wherein the liquid is separated into a fraction with higher fat content and into a fraction with lower fat content wherein the low-fat fraction is heat treated and wherein the high-fat fraction is treated with electromagnetic radiation and both fractions are combined.

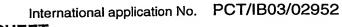
In D1 the total liquid product is first heated and then treated with electromagnetic radiation.

In D2 the liquid is separated into high-fat fraction an low-fat fraction. The high-fat fraction is treated with UV radiation and the low-fat fraction with IR radiation.

D3 discloses a method wherein only part of the liquid is treated with radiation.

D4 discloses a method wherein IR radiation is used for pasteurization and UV radiation is used for sterilization.

D5 discloses a method wherein slurry is pre-heated and then treated with radiation.



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D6 discloses a method for the production of consumer milk wherin the milk is separated into a cream and a skim milk fraction, the cream fraction is treated at high temperature and the skim milk fraction is pasteurized and then both fractions are combined.

D7 discloses a method wherein biological and alimentary products are first heat treated and then treated with radiation.

In D8 milk is treated with a high frequency electrostatic field. en de la computation del computation de la computation del computation de la computation del computation del computation del computation de la computation d

Therefore the requirments of novelty Art. 33(2) PCT are met.

The problem of the pending application was to provide a method and a plant for 3. treating liquids such as milk in a cost-effecive, complete and reliable manner with limited heat damage. D2 is regarded to represent the closest prior art. D2 differs from the pending application in that the treatment of the low-fat part is carried out by IR radiation. There was no hint in the prior art that the heat treatment step as defined in the pending claim 1 would solve the posed problem as D2 doesw not contemplate any heat treament.

Therefore the requirements of inventive step (Art. 33(3) PCT) are met.